

## **REMARKS**

Applicant would like to thank the Examiner for the thorough review of the present application. As discussed in detail below, the present claims in the present application include recitations that patently distinguish the claimed invention over the cited references, taken individually or in combination. Based upon the following remarks, Applicant respectfully requests reconsideration of the present application and allowance of the pending claims.

### **Claims Status**

Claims 1 – 4 are currently pending in the present application.

Claim 1 has been amended to further distinguish the claim from the cited reference. Distinguishing arguments are provided below.

Applicant would like to thank the Examiner for the allowance of Claims 3 –5.

Claim 6 is a new claim that has been added to provide further definition as to the geometric shape of the radiation patch.

### **Claim Rejections Under 35 U.S.C. § 102(b)**

Claim 1 stands rejected under 35 U.S.C. § 102(b) as being anticipated by United States Patent No. 5,926,150, issued to McLean et al (hereinafter “the McLean patent”). Applicant respectfully submits that this rejection is overcome by the following arguments.

The McLean Patent Does Not Teach or Suggest a Radiation Patch Having a Plan View  
Rectangular Shape Absent a Right-Triangle Corner Portion that Defines a Cutting Edge Bisecting  
First and Second Perpendicular Sides of the Rectangular Shape.

Claim 1 has been amended to more accurately describe the radiation patch in terms of the plan view shape. Specifically, claim 1 defines the radiation patch as having a plan view rectangular shape absent a right-triangle portion that defines a cutting edge bisecting first and second perpendicular sides of the rectangular shape. Support in the specification for the amended claim language is found in Figure 2. As shown in Fig. 2, the radiation patch (201) has a plan view rectangular shape absent a right-triangle corner portion. The absence of the right-triangle corner portion defines the cutting edge that bisects the first and second perpendicular sides of the rectangular shape. In Figure 2, the first perpendicular side is defined as  $L_P$  and the second perpendicular side is defined as  $W_P$ . The diagonal line (not designated by a reference in Figure 2) that bisects the  $L_P$  side and the  $W_P$  side is the cutting edge of the radiation patch.

The McLean patent discloses and illustrates planar frame triangular radiating elements (200) and (300) that are asymmetrical triangular in plan view shape. However, the McLean patent neither teaches, suggests or implies a radiation patch/element having a plan view rectangular shape absent a right-triangle portion that defines a cutting edge bisecting first and second perpendicular sides of the rectangular shape. The Applicant notes the McLean patent does disclose and illustrate a planar frame rectangular radiating element (100), however, the rectangular radiating element (100) is not described or shown as having an absent a right-triangle portion that defines a cutting edge bisecting first and second perpendicular sides of the rectangular shape.

The McLean Patent Does Not Teach or Suggest a Radiation Patch Wherein a Length of the First Side Bisected by the Cutting Edge and a Width of the Second Side Bisected by the Cutting Edge are Determined According to a Desired Resonant Frequency of the Radiation Patch.

Claim 1 has been amended to more accurately describe which sides of the radiation patch are adjusted, in terms of length and width, according to a desired resonance frequency of the radiation patch. Specifically, claim 1 is further limited such that the length of the first side and the width of the second side are determined according to a desired resonant frequency of the radiation patch. The first and second sides being defined as perpendicular sides that are bisected by the cutting edge. Support in the specification for the amended claim language is shown in

Figure 2 and described at page 4, lines 22-31 (paragraph [0026] of the published application). Specifically, at page 4, lines 29-30, state, “That is, by controlling the ratio of  $L_P$  and  $W_P$  of the linearly tapered rectangle shape of radiation patch (201), the bandwidth of the radiation patch can be widened.”

The Office Action references the McLean patent at column 3 – column 4 line 23 for a teaching of determining the dimensions of the antenna, specifically the claimed dimensions of the perpendicular sides ( $L_P$  and  $W_P$ ) bisected by the cutting edge, based on the desired resonant frequency. However, applicant fails to appreciate a specific teaching of the determination of the radiation element dimensions based on a desired resonant frequency in the cited passages or elsewhere in the disclosed teachings of the McLean patent. Even if the McLean patent provides such a teaching, suggestion of a teaching or implication of such a teaching, the McLean patent clearly does not show determining a length and width of first and second sides ( $L_P$  and  $W_P$ ) of the radiation patch according to a desired frequency, because the radiation patches (100), (200) and/or (300) shown and described in the McLean patent do not include first and second perpendicular sides that are bisected by a cutting edge.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claim 1. Newly added claim 6 reflects the same limitations in terms of the shape of radiation patch as claim 1 and is believed allowable for at least the same reasons as presented above with respect to Claim 1.

### **Conclusion**

Therefore, all objections and rejections having been addressed, it is respectfully submitted that the present application is in condition for allowance and a Notice to that effect is earnestly solicited.

Should any questions remain unresolved, the Examiner is encouraged to contact the undersigned attorney for Applicants at the telephone number indicated below in order to expeditiously resolve any remaining issues.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

LOWE HAUPTMAN & BERNER, LLP  
/Yoon S Ham/  
Yoon S Ham  
Registration No. 45,307

Customer Number: 22429  
1700 Diagonal Road, Suite 300  
Alexandria, Virginia 22314  
(703) 684-1111  
(703) 518-5499 Facsimile  
Date: July 5, 2007